

IFWsrch.txt

<http://www.google.com/>  
"point-mass-on-sliders moving radially outward"  
"SD/FAST User's Manual" spacecraft  
"SD/FAST" spacecraft reflector  
"SD/FAST" spacecraft "L-band" antenna  
"SD/FAST" spacecraft antenna  
"SD/EXACT" +pdf spacecraft antenna  
"SD/FAST" "SD/EXACT" antenna  
SYMBA spacecraft reflector OR antenna

## EAST Search History

| Ref # | Hits | Search Query  | DBs  | Default Operator | Plurals | Time Stamp       |
|-------|------|---|--|------------------|---------|------------------|
| S1    | 14   | Che-Hang.in. Ih.in.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | AND              | ON      | 2006/10/30 13:29 |
| S2    | 0    | ((point\$1mass\$1on\$1slider or (point mass on slider)) mov\$3 radial\$2 outward)   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | WITH             | ON      | 2006/10/30 17:14 |
| S4    | 7    | ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with (spacecraft space\$1craft craft satellite "launch vehicle" "Space Shuttle" aircraft air\$1craft ) with ((L\$1band adj antenna) (reflector with boom) payload pay\$1load) with (deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2006/10/30 17:20 |
| S5    | 44   | ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with (spacecraft space\$1craft craft satellite "launch vehicle" "Space Shuttle" aircraft air\$1craft ) with antenna with (deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable))   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2006/10/30 17:22 |
| S6    | 14   | (S4 S5) and (((deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable) with (packed packing pack stored storing store stow stowed collapse collapsed collapsing collapsable) with (measure measured measurement measuring parameter parameterization)) (time near2 (variable varying varies dependent dependends)))  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2006/10/30 17:39 |
| S7    | 21   | (S4 S5) and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with ((center near2 mass near2 (movement motion change changed changing speed orbit fly flight flying flew)) dynamic dynamically ((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll))  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2006/10/30 17:39 |
| S8    | 10   | S6 S7   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | AND              | ON      | 2006/10/30 17:29 |

## EAST Search History

|     |    |   |  |    |    |                  |
|-----|----|---|--|----|----|------------------|
| S9  | 19 | ("5355138"   "5400036"   "5697050").PN. OR ("5790071").URPN.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 17:34 |
| S10 | 16 | ("3100264"   "3127516"   "4621329"   "4740681"   "4944587"   "5177686"   "5223702"   "5348255").PN. OR ("6102338").URPN.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 17:36 |
| S11 | 21 | ("3100264"   "3127516"   "4621329"   "4740681"   "4758957"   "4944587"   "5177686"   "5205518"   "5223702"   "5279483"   "5348255"   "5508932"   "5562266"   "6020956"   "6047226").PN. OR ("6227496").URPN.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 17:37 |
| S12 | 26 | (S9 S10 S11) and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with ((center near2 mass near2 (movement motion change changed changing speed orbit fly flight flying flew)) dynamic dynamically ((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll))   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 17:50 |
| S13 | 4  | (S9 S10 S11) and (((deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopic tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable) with (packed packing pack stored storing store stow stowed collapse collapsed collapsing collapsable) with (measure measured measurement measuring parameter parameterization)) (time near2 (variable varying varies dependent dependends))) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 17:50 |
| S14 | 25 | ("5108050"   "5109346"   "5204818"   "5348255"   "5396326"   "5412574"   "5556058"   "5562266"   "5672872"   "5749545"   "5783825"   "5790071"   "5821526"   "5852792"   "5984238"   "6047226"   "6108593"   "6108594"   "6131058"   "6145790"   "6227496"   "6236939"   "6266616"   "6272432").PN. OR ("6691033").URPN.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 17:47 |
| S15 | 46 | ("3414214"   "4567485"   "4599619"   "4630058"   "4901307"   "4910524"   "4910792"   "5010317"   "5070338"   "5073900"   "5081703"   "5109390"   "5119225"   "5216427"   "5233626"   "5239671"   "5258764"   "5303286"   "5339330"   "5410728"   "5415368"   "5422647"   "5433726"   "5439190"   "5446756"   "5448623"   "5621415"   "Re32905").PN. OR ("5697050").URPN.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 17:48 |
| S16 | 26 | ("5100084"   "5109346"   "5141177"   "5259577"   "5323322"   "5335179"   "5348255"   "5452869"   "5562266"   "5582368"   "5614897"   "5672872"   "5686719"   "5751853").PN. OR ("6047226").URPN.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 17:49 |
| S17 | 25 | ("5108050"   "5109346"   "5204818"   "5348255"   "5396326"   "5412574"   "5556058"   "5562266"   "5672872"   "5749545"   "5783825"   "5790071"   "5821526"   "5852792"   "5984238"   "6047226"   "6108593"   "6108594"   "6131058"   "6145790"   "6227496"   "6236939"   "6266616"   "6272432").PN. OR ("6691033").URPN.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 17:49 |
| S18 | 45 | (S14 S15 S16 S17) and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with ((center near2 mass near2 (movement motion change changed changing speed orbit fly flight flying flew)) dynamic dynamically ((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll))  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 18:05 |

## EAST Search History

|     |    |  |  |    |    |                  |
|-----|----|--|--|----|----|------------------|
| S19 | 27 | (S14 S15 S16 S17) and (((deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopic tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable) with (packed packing pack stored storing store stow stowed collapse collapsed collapsing collapsable) with (measure measured measurement measuring parameter parameterization)) (time near2 (variable varying varies dependent dependends))) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 18:05 |
| S20 | 10 | (S12 S13 S18 S19) and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with (((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) WITH (position relative) WITH reference))   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 18:06 |
| S21 | 18 | ("5020744"   "5255879"   "5412574"   "5508932"   "5597142"   "5745869"   "5826828"   "5865402"   "5919314"   "6019320"   "6266585"   "6266616"   "6463366"   "6470270"   "6512979"   "6588708"   "6691033"   "6945500").PN. OR ("7062363").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 17:59 |
| S22 | 33 | ("3813067"   "4119972"   "4358076"   "4725024"   "4931942"   "5020744"   "5042752"   "5080307"   "5100084"   "5139218"   "5140525"   "5257759"   "5349532").PN. OR ("5556058").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 17:59 |
| S23 | 22 | ("3599495"   "4393710"   "4437047"   "4869092"   "5277385"   "5279483"   "5421187").PN. OR ("5562266").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 18:00 |
| S24 | 8  | ("3681583"   "5205518"   "5259577"   "5308024").PN. OR ("6020956").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 18:01 |
| S25 | 30 | ("3866025"   "3937423"   "3998409"   "4071211"   "4807835"   "5100084"   "5222023"   "5225885"   "5337241"   "5400033"   "5452869"   "5485156"   "5546309"   "5556058"   "5687933"   "5698842"   "5721431"   "5738309"   "5806804"   "5862495"   "5899945"   "5914483"   "5931421").PN. OR ("6108593").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 18:02 |
| S26 | 8  | ("5745869").PN. OR ("6266616").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 18:02 |
| S27 | 9  | ("4801202"   "5109346"   "5687084"   "5821526"   "5852792"   "6047226"   "6108594"   "6113034").PN. OR ("6417798").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 18:03 |
| S30 | 70 | (S21 S22 S23 S24 S25 S26 S27) and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with ((center near2 mass near2 (movement motion change changed changing speed orbit fly flight flying flew)) dynamic dynamically ((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll))   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 18:11 |

## EAST Search History

|     |    |  |  |    |    |                  |
|-----|----|--|--|----|----|------------------|
| S31 | 20 | (S21 S22 S23 S24 S25 S26 S27) and (((deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopicable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable) with (packed packing pack stored storing store stow stowed collapse collapsed collapsing collapsable) with (measure measured measurement measuring parameter parameterization)) (time near2 (variable varying varies dependent dependends))) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 18:12 |
| S32 | 8  | (S21 S22 S23 S24 S25 S26 S27) and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with (((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) WITH (position relative) WITH reference))   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 18:12 |
| S33 | 54 | ("4521855"   "4617634"   "4728061"   "4754280"   "4786018"   "4807835"   "4837699"   "4883244"   "4944587"   "5020744"   "5062051"   "5109346"   "5412574").PN. OR ("5546309").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 18:10 |
| S34 | 9  | ("5123617"   "5201833"   "5308024"   "5850992"   "6020956"   "6089508"   "6298289"   "6456907"   "RE37374").PN. OR ("6536713").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 18:11 |
| S35 | 46 | (S33 S34) and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with ((center near2 mass near2 (movement motion change changed changing speed orbit fly flight flying flew)) dynamic dynamically ((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll))   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 18:12 |
| S36 | 20 | (S33 S34) and (((deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopicable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable) with (packed packing pack stored storing store stow stowed collapse collapsed collapsing collapsable) with (measure measured measurement measuring parameter parameterization)) (time near2 (variable varying varies dependent dependends)))                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 18:12 |
| S37 | 3  | (S33 S34) and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with (((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) WITH (position relative) WITH reference))   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/10/30 18:12 |
| S38 | 28 | (US-20040193292-\$ or US-20050230559-\$ or US-20050246074-\$ or US-20040122637-\$).did. or (US-6990396-\$ or US-7025307-\$ or US-6138953-\$ or US-5152482-\$ or US-5271582-\$ or US-6684182-\$ or US-5790071-\$ or US-6102338-\$ or US-6227496-\$ or US-5697050-\$ or US-6047226-\$ or US-6691033-\$ or US-5119225-\$ or US-5556058-\$ or US-5562266-\$ or US-6020956-\$ or US-6108593-\$ or US-6266616-\$ or US-6417798-\$ or US-7062363-\$ or US-5546309-\$ or US-6266585-\$ or US-6536713-\$).did. or (US-3127516-\$).did.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2006/10/30 18:14 |

## EAST Search History

|     |    |   |                              |     |    |                  |
|-----|----|---|------------------------------|-----|----|------------------|
| S39 | 4  | S38 and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with ((center near2 mass near2 (movement motion change changed changing speed orbit fly flight flying flew)) dynamic dynamically ((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll)) and (((deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable) with (packed packing pack stored storing store stow stowed collapse collapsed collapsing collapsable) with (measure measured measurement measuring parameter parameterization)) (time near2 (variable varying varies dependent dependends))) and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with (((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) WITH (position relative) WITH reference))) | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/30 20:02 |
| S40 | 0  | S39 and ((ellipsis elliptic elliptical) near2 (cylindrical cylindric cylinder))   | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/30 18:16 |
| S41 | 0  | S39 and (spherical spheric sphere cylindrical cylindric cylinder ellipsis elliptic elliptical diamond umbrella )  | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/30 18:22 |
| S42 | 0  | S38 and ((ellipsis elliptic elliptical) near2 (cylindrical cylindric cylinder))   | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/30 18:16 |
| S43 | 9  | S38 and (spherical spheric sphere cylindrical cylindric cylinder ellipsis elliptic elliptical diamond umbrella )  | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/30 18:16 |
| S44 | 0  | S38 and ((shell with model) shell\$1model)  | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/30 18:17 |
| S45 | 0  | S39 and ((antenna (reflector with boom) payload pay\$1load) with (deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable))   | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/30 18:22 |
| S46 | 11 | S38 and ((antenna (reflector with boom) payload pay\$1load) with (deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable))   | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/30 18:22 |
| S47 | 0  | S39 S46   | US-PGPUB;<br>USPAT;<br>USOCR | AND | ON | 2006/10/30 18:22 |

## EAST Search History

|     |   |  |                              |    |    |                  |
|-----|---|--|------------------------------|----|----|------------------|
| S48 | 0 | S38 and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with ((center near2 mass near2 (movement motion change changed changing speed orbit fly flight flying flew)) dynamic dynamically ((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) with (deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable)) and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with (((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) WITH (position relative) WITH reference)) | US-PGPUB;<br>USPAT;<br>USOCR | OR | ON | 2006/10/30 19:56 |
| S49 | 0 | S38 and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) with ((center near2 mass near2 (movement motion change changed changing speed orbit fly flight flying flew)) dynamic dynamically ((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) with (deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable) with (((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) WITH (position relative) WITH reference))  | US-PGPUB;<br>USPAT;<br>USOCR | OR | ON | 2006/10/30 20:03 |
| S50 | 0 | S38 and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) same ((center near2 mass near2 (movement motion change changed changing speed orbit fly flight flying flew)) dynamic dynamically ((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) same (deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable) same (((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) WITH (position relative) WITH reference))  | US-PGPUB;<br>USPAT;<br>USOCR | OR | ON | 2006/10/30 20:04 |

## EAST Search History

|     |    |  |                              |     |    |                  |
|-----|----|--|------------------------------|-----|----|------------------|
| S51 | 10 | S38 and ((simulat\$3 predict\$3 model\$4 algorithm (SD\$1FAST with PTC) estimat\$3 software soft\$1ware "soft ware" (((finite adj2 element) "finite element" finite\$1element ) adj2 analysis) FEA NASTRAN SYSNOISE ABAQUS) and ((center near2 mass near2 (movement motion change changed changing speed orbit fly flight flying flew)) dynamic dynamically ((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) and (deployed deploy deploying deployable expandable expanded expand expanding extend extended extendable extending bloom bloomed blooming ((spread spreading) adj out) distribute distributed distributable telescope telescoped telescoping telescopable tele\$1scope tele\$1scoped tele\$1scoping tele\$1scopable) and (((rotate rotated rotation rotational rotating) with (translate translated translation translational translating)) attitude pitch roll) WITH (position relative) WITH reference)) | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/30 20:07 |
| S52 | 2  | S43 S46 S51  | US-PGPUB;<br>USPAT;<br>USOCR | AND | ON | 2006/10/30 20:07 |
| S53 | 28 | (US-20040193292-\$ or US-20050230559-\$ or US-20050246074-\$ or US-20040122637-\$).did. or (US-6990396-\$ or US-7025307-\$ or US-6138953-\$ or US-5152482-\$ or US-5271582-\$ or US-6684182-\$ or US-5790071-\$ or US-6102338-\$ or US-6227496-\$ or US-5697050-\$ or US-6047226-\$ or US-6691033-\$ or US-5119225-\$ or US-5556058-\$ or US-5562266-\$ or US-6020956-\$ or US-6108593-\$ or US-6266616-\$ or US-6417798-\$ or US-7062363-\$ or US-5546309-\$ or US-6266585-\$ or US-6536713-\$).did. or (US-3127516-\$).did.  | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/31 18:21 |
| S54 | 3  | S53 and (((one single) with body) one\$1body single\$1body) with (antenna (reflector with boom) payload pay\$1load))   | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/31 18:23 |
| S55 | 0  | S53 and (((one single) with body) one\$1body single\$1body) with model\$4)   | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/31 18:48 |
| S56 | 13 | ("4306692"   "4325124"   "4949922"   "5312073"   "5626315"   "5816540"   "5850992"   "5906339"   "6032903"   "6076773"   "6138953"   "6463365"   "6484973").PN. OR ("6990396").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/31 18:40 |
| S57 | 8  | ("4325124"   "4949922"   "5816540"   "5906339"   "6032903"   "6076773"   "6463365"   "6484973").PN. OR ("7025307").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/31 18:42 |
| S58 | 13 | S56 S57  | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/31 18:42 |
| S59 | 3  | S53 and (body with model\$4)   | US-PGPUB;<br>USPAT;<br>USOCR | OR  | ON | 2006/10/31 18:48 |